



Research note

Studies in Cyperaceae in southern Africa 43: *Scirpoides varius* Browning — a new name for *Scirpus varius* Boeck. ex. C.B. Clarke

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Abstract

Scirpoides varius Browning is established to accommodate the southern African endemic sedge *Scirpus varius* Boeck. ex C.B. Clarke, an illegitimate name in *Scirpus*. Morphological considerations support the transfer of the taxon to *Scirpoides* Ség., and there is no hindrance to the use of the epithet 'varius' in *Scirpoides*.

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1. Introduction

Scirpus L. (1753) was until recently a large and heterogeneous genus but has been gradually reduced by segregation, its parts being assigned "to more than 50 other genera" (Goetghebeur, 1998). Its core, *Scirpus* L. *sensu stricto*, is now understood to be essentially temperate, and predominantly American, with no species in Africa (Haines and Lye, 1983: 41). Gordon-Gray (1995) treated five species under *Scirpus* for KwaZulu-Natal (as Natal), South Africa but with intimation that alternative placement was necessary when some of these were more fully known. Of these species just one remains in *Scirpus*, namely *Scirpus varius* Boeck. ex C.B. Clarke (1898). The name is an illegitimate later homonym of *Scirpus varius* Schreb. ex Schweigg & Körte (1811), which is itself a nomen novum for *Scirpus reptans* Thuill. (1799). Both are homotypic synonyms of *Eleocharis palustris* (L.) Roem. & Schult. (Govaerts et al., 2007: 713, 765).

Scirpus varius Boeck. ex C.B. Clarke is imperfectly known, and is currently unplaced to genus (Govaerts et al., 2007). It has been recorded from the South African provinces KwaZulu-Natal and what was previously known as Transvaal (Limpopo,

North West, Gauteng, Mpumalanga), and is also present in Botswana, Swaziland, and Lesotho. Plants occur in small colonies, scattered where the habitat is muddy with semi-permanent water and sometimes rock strewn soil, at altitudes of about 1400–1590 m. A new name is given in the genus *Scirpoides* where there is no hindrance to the use of the epithet 'varius'.

2. Discussion

Scirpoides is morphologically intermediate between *Ficinia* Schrader and *Isolepis* R.Br., leading Goetghebeur (1998: 169) to observe that "Generic delimitation vs. *Ficinia* and *Scirpoides* is highly problematic." and under *Ficinia* (p. 168), that "This morphologically heterogeneous genus is in need of a thorough revision."

The absence/presence of bristles (perianth segments) developed at the base of the ovary and distributed with the mature fruit has been accorded great taxonomic significance in the group. As yet, no species bearing bristles has been admitted to either *Ficinia* or *Scirpoides*, yet there are other accepted genera in which bristles range from absent, through rudimentary, to present, and usually distributed when present with the fruit. *Fuirena* Rottb. and *Schoenoplectus* (Rchb.) Palla are South

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African examples. In *Scirpus varius*, bristles [as “hypogynous glumes”] are reported “rudimentary or 0” (Clarke, 1898: 229).

On the species cover of *Buchanan 225* of *Scirpus varius*, Clarke in Dec. 1887 in pencil noted ‘It does not appear allied to any other *Scirpus* species, except *S. mexicanus* Britton’. There is another entry by Clarke in Dec 1887 — ‘The pistil has microscopic obsolete squamulae at its base, and these are obscurely seen on the dilated foot of the nut. A tendency to *Ficinia*’. Then in brackets under this — ‘Very near *Scirpus cyperoides* Hemsl.’ These comments indicated possible affinity of *Scirpus varius* with *Karinia mexicana* (Britton) Reznicek & McVaugh. Details and illustrations of *S. varius* were sent to Anton Reznicek for his observations and comparison with the endemic Mexican species. His suggestion was that the African material would best be placed in the genus *Scirpoides*.

Scirpus varius has a well developed basal primary bract that overtops the inflorescence and continues the line of the culm. The outermost primary bract is particularly conspicuous in its length and positioning above the flowering head, or heads. An overtopping bract is a criterion of *Scirpoides* (“primary bracts culmlike, lowermost bract erect” (Goetghebeur, 1998: 169), unlike in *Scirpus*, where the primary bracts are leaf-like and spreading (Goetghebeur, 1998: 162).

Another criterion of generic significance is embryo structure at the time of nutlet dissemination. Genera typically have the same embryo type or almost so, and thus a taxon with a differing embryo among others that are uniform, is suggestive of faulty generic placement. Unfortunately we have not been able to determine precisely the embryo type in *S. varius*. The species is rare, with very small nutlets. As the genera *Ficinia*, *Isolepis* and *Scirpoides* are all members of tribe Cyperace Dumort, we assume that *S. varius* has a *Cyperus* type embryo.

3. Taxonomy

3.1. Placement in *Scirpoides*

Scirpoides varius Browning *nom. nov.*, *pro Scirpus varius* Boeckeler ex C.B. Clarke in Thiselton-Dyer, Fl. cap. 7: 229 (1898), *nom. illeg.*, *non S. varius* Schreb. ex Schweigg & Körte, Fl. Erlang.: 11 (1811) [= *Eleocharis palustris* (L.) Roem. & Schult.].

Type: Basutoland [Lesotho], Leribe, *Buchanan 225* (K!, lecto., designated here).

Note: *Buchanan 225* was chosen in preference to the two other K syntypes because Clarke’s annotated pencil drawings were on this sheet.

3.2. Species description

Perennial, tufted or rhizomatous with woody rhizome, 800–1000 mm tall. Culms 3-angled apically, 1.25–2 mm diam., smooth. Leaves basal, occasionally sparse, stiff, shorter than or less often as long as culm length, 2–4 mm wide, glabrous. Inflorescence pseudolateral, overtopped by main primary bract, primary bract ± 130 mm long, erect continuing culm line; additional bracts 2, each reduced by ½ length of precursor to 3–5 small bracts invisible beyond limits of capitulum, all bracts

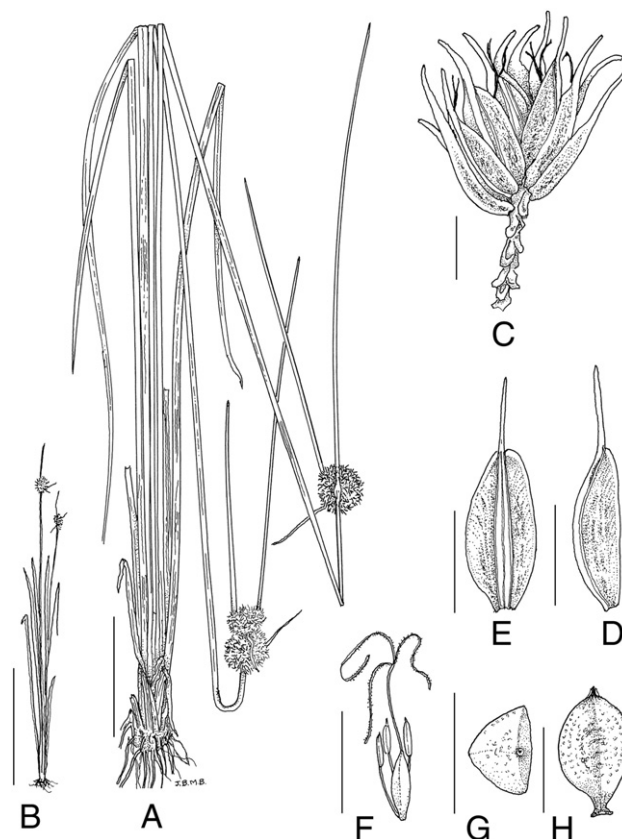


Fig. 1. *Scirpoides varius* Browning. A, B, habit; C, spikelet; D, glume, lateral view; E, glume abaxial view; F, floret; G, nutlet, apical view; H, nutlet, abaxial view. A, B, J.P.H. Acocks 21025; C, J.P.H. Acocks 11418; D–H, T.H. Arnold 370 (all K). Bars: A=40 mm; B=250 mm; C–F=1 mm; G, H, = 0.5 mm.

scabrid. Flowering head solitary or in close groups of (2-) 3–4 (-5), 8–12 mm diam., sessile or shortly branched, each bracteate; collective heads 15–45 × 10–15 (-17) mm. Spikelets numerous per head, ± 4 mm long, in close packed groups; glumes spiral, occasionally appearing almost distichous, 2.25–2.75 mm long including arista of 0.6–0.85 mm long, keel and arista strongly developed, green, with 2 prominent lateral nerves, flanks delicate, brown, sometimes translucent. Stamens 3. Style branches 3, ± as long as style. Nutlet ± 0.75 × 0.4 mm, trigonous, pale brown, basal foot expanded, surface indistinctly patterned by faintly marked longitudinal striations, faintly punctulate at maturity (Fig. 1).

3.3. Notes

Buchanan 225 (K), and two other collections cited by Clarke (1898, p.229) are filed in the Kew Herbarium Catalogue as types of *Scirpus variabilis*, an orthographic error for *S. varius*.

3.4. Distribution

Scirpoides varius is endemic to sub-Saharan Africa but its distribution is as yet imperfectly delimited. Records suggest possible association with the Afrotropical temperate floras as the species is present at higher altitudes and unknown south of the Tugela River basin in South Africa. Nowhere is it present in

quantity. It is in need of protection, wherever it occurs — mostly in semi-to-permanently wet areas, perhaps associated with sandy substrates (?).

4. Selected citations

- 2425 (Gaborone): Down stream of Mmakgodumo Dam, Kanye (CD), *P.A. Smith* 5376 (NU ex SRGH).
- 2430 (Pilgrims Rest): Hoodspruit on Olifants River, 3 km from Strydom tunnel (-BD), *Arnold* 370 (K, PRE); Ohrigstad Dam Nature Reserve (-DD), *Jacobsen N.H.G.* 2749 (PRE).
- 2531 (Komatipoort): Barberton, Transvaal; Rose's Creek (-CC), *Thorncroft* PRE no. 2890 (K, PRE).
- 2628 (Heidelberg): 20.3 mls SW by W of Heidelberg (-AD), *Acocks* 21025 (K, PRE).
- 2631 (Mbabane): Pigs Peak, Komati Bridge near Piggs Peak (AA), *Haines, R.W.*, 7045 (PRE).
- 2828 (Bethlehem): Leribe (-CC), *Buchanan* 225 [Kew Cat. K000671266]. Lectotype.
- 2830 (Dundee): Foot of Griffin's Hill (-CC), *Acocks* 11418 (K, PRE).

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